

In the claims:

1 through 4 (Cancelled)

5. (Previously presented) A method for bioremediation of water in the containment area of a nuclear power plant containing spent nuclear fuel comprising the steps of providing a bioreactor containing a metallic material capable of being colonized by viable but not culturable microorganisms found in said water and passing said water through said bioreactor to form a biofilm that retains radionuclides including 60-Co.

6. (Currently amended) A method according to claim [[5]] 11 wherein said metallic material is made of a material selected from the group consisting of stainless steel and titanium.

7. (Previously presented) A method according to claim 6 wherein said metallic material is formed into balls.

8. (Previously presented) A method according to claim 5 wherein said step of providing a bioreactor comprises forming said metallic material into balls, degreasing said balls, sterilizing said balls, and placing said balls in said bioreactor.

9. (Previously presented) A method according to claim 8 wherein the cross sectional area of said bioreactor is about 280 mm² and said step of passing said water through said bioreactor comprises pumping through said bioreactor an average of about three cubic meters of said water per hour.

10. (Previously presented) A method according to claim 9 wherein said bioreactor is cylindrical and about 250 mm high.

11. (New) A method according to claim 5 wherein said metallic material is non-corrosive or non-degradable.

12. (New) A method according to claim 5 wherein said metallic material is also capable of being colonized by culturable microorganisms.

13. (New) A method according to claim 5 wherein said step of passing said water through said bioreactor comprises passing said water through said bioreactor in a continuous flow.